CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

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TENTATIVE ORDER NO. R9-2018-0062
NPDES NO. CA0109215

WASTE DISCHARGE REQUIREMENTS FOR SAN DIEGO GAS AND ELECTRIC COMPANY PALOMAR ENERGY CENTER DISCHARGE TO THE PACIFIC OCEAN THROUGH THE SAN ELIJO OCEAN OUTFALL

The following Discharger is subject to waste discharge requirements (WDRs) set forth in this Order:

Table 1. Discharger Information

Discharger	San Diego Gas and Electric Company
Name of Facility	Palomar Energy Center
Facility Address	2300 Harveson Place
	Escondido, CA 92029
	San Diego County

Table 2. Discharge Locations

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
I-001	Low Volume Waste Sources	33° 07' 090" N	117° 07' 032" W	Internal Discharge Location
001	Cooling Tower Blowdown	33° 00' 21" N	117° 18' 09" W	Pacific Ocean

Table 3. Administrative Information

This Order was adopted on:	**October 10, 2018**
This Order shall become effective on:	**December 1, 2018**
This Order shall expire on:	**November 30, 2023**
The Discharger shall file a Report of Waste Discharge (ROWD) as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations (CCR), and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than:	**180 days prior to the Order expiration date**
The U.S. Environmental Protection Agency (USEPA) and the California Regional Water Quality Control Board, San Diego Region have classified this discharge as follows:	**Major**

I, David W. Gibson, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, San Diego Region, on the date indicated above.

TENTATIVE
David W. Gibson, Executive Officer

CONTENTS

TABLES

ATTACHMENTS

I. FACILITY INFORMATION

Information describing the Palomar Energy Center (PEC or Facility) is summarized in Table 1 and in sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Facility's permit application.

II. FINDINGS

The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board), finds:

A. **Legal Authorities.** This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (Water Code) (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). This Order shall serve as an NPDES permit authorizing the San Diego Gas and Electric Company (SDG&E or Discharger) to discharge into waters of the United States (U.S.) at the discharge location described in Table 2 subject to the WDRs in this Order.

B. **Background and Rationale for Requirements.** The San Diego Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for the requirements in this Order, is hereby incorporated into and constitutes Findings for this Order. Attachments A through E, G, and H are also incorporated into this Order.

C. **Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections IV.B, IV.C, V.B, VI.C.1.b, and VI.C.1.c are included to implement State law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

D. **Executive Officer Delegation of Authority.** The San Diego Water Board by prior resolution has delegated all matters that may legally be delegated to its Executive Officer to act on its behalf pursuant to Water Code section 13223. Therefore, the Executive Officer is authorized to act on the San Diego Water Board's behalf on any matter within this Order unless such delegation is unlawful under Water Code section 13223 or this Order explicitly states otherwise.

E. **Notification of Interested Parties.** The San Diego Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. The San Diego Water Board has also provided an opportunity for the Discharger and interested agencies and persons to submit oral comments and recommendations at a public hearing. Details of the notification are provided in the Fact Sheet (Attachment F).

F. **Consideration of Public Comment.** The San Diego Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the public hearing are provided in the Fact Sheet (Attachment F).

THEREFORE, IT IS HEREBY ORDERED, that this Order supersedes Order No. R9-2012-0015, as amended by Order No. R9-2017-0012, except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines

adopted thereunder, the Discharger shall comply with the requirements in this Order. The Discharger is hereby authorized to discharge subject to WDRs in this Order at the discharge location described in Table 2 to the Pacific Ocean off the coast of San Diego County. If any part of this Order is subject to a temporary stay of enforcement, unless otherwise specified in the order granting stay, the Discharger shall comply with the analogous portions of Order No. R9-2012-0015, as amended by Order No. R9-2017-0012. This action in no way prevents the San Diego Water Board from taking enforcement action for past violations of Order No. R9-2012-0015, as amended by Order No. R9-2017-0012.

III. DISCHARGE PROHIBITIONS

A. The discharge of waste from the Facility not in compliance with the effluent limitations specified in section IV.A of this Order, and/or to a location other than Discharge Point No. 001, unless specifically regulated by this Order or separate WDRs, is prohibited.

B. The discharge of polychlorinated biphenyl (PCB) compounds such as those commonly used for transformer fluid at Discharge Point Nos. 001 and I-001 is prohibited.

C. The Discharger must comply with Discharge Prohibitions contained in chapter 4 of the *Water Quality Control Plan for the San Diego Basin* (Basin Plan), incorporated into this Order as if fully set forth herein and summarized in Attachment G, as a condition of this Order.

D. The Discharger must comply with Discharge Prohibitions contained in the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (Ocean Plan), incorporated into this Order as if fully set forth herein and summarized in Attachment G, as a condition of this Order.

E. The use of any priority pollutant listed in Appendix A of title 40 of the Code of Federal Regulations (40 CFR) part 423, in the contents of chemical formulations added for cooling tower maintenance is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations and Performance Goals

1. Effluent Limitations

a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point No. 001, with compliance measured at Monitoring Location EFF-001, as described in the Monitoring and Reporting Program (MRP, Attachment E):

Table 4. Effluent Limitations for at Monitoring Location EFF-001[1]

Parameter	Units	Effluent Limitations			
		6-Month Median	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow	million gallons per day (MGD)	--	1.4	--	--
Free Available Chlorine[1]	microgram per liter (µg/L)	--	200[2]	--	500
	pounds per day (lbs/day)	--	2.3[2,3]	--	5.8[3]
Total Chlorine Residual[1]	µg/L	476	1,900	--	14,300
	lbs/day	5.6[4]	22[4]	--	167[4]
pH	standard units (SU)	--	--	6.0	9.0

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. Applied as a two-hour average.

3. The mass emission rate (MER) limitations for free available chlorine, in lbs/day, were calculated based on the following equation: MER (lbs/day) = 8.34 x Q x C, where Q is the reasonable measure of the actual production of the Facility (maximum daily flow of 1.38 MGD) and C is the concentration (mg/L).
4. The MER limitations for total chlorine residual, in lbs/day, were calculated based on the following equation: MER (lbs/day) = 8.34 x Q x C, where Q is the permitted flow for the Facility (1.4 MGD) and C is the concentration (mg/L).

b. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point No. I-001 for low volume waste sources, with compliance measured at Monitoring Location I-001, as described in the MRP (Attachment E):

Table 5. Effluent Limitations at Monitoring Location I-001[1]

Parameter	Units	Effluent Limitations			
		30-day Average	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	SU	--	--	6.0	9.0
Total Suspended Solids (TSS)	mg/L	30	100	--	--
	lbs/day	115[2]	742[3]	--	--
Oil and Grease	mg/L	15	20	--	--
	lbs/day	58[2]	148[3]	--	--

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. The MER limitations, in lbs/day, were calculated based on the following equation: MER (lbs/day) = 8.34 x Q x C, where Q is the reasonable measure of the actual production of the Facility (maximum average monthly of 0.46 MGD) and C is the concentration (mg/L).
3. The MER limitations, in lbs/day, were calculated based on the following equation: MER (lbs/day) = 8.34 x Q x C, where Q is the reasonable measure of the actual production of the Facility (maximum daily of 0.89 MGD) and C is the concentration (mg/L).

2. Performance Goals

Parameters that do not have reasonable potential to cause or contribute to an exceedance of water quality objectives, or for which reasonable potential to cause or contribute to an exceedance of water quality objectives cannot be determined, are referred to as performance goal parameters and are assigned the performance goals listed in Table 6. Performance goal parameters shall be monitored at Monitoring Location EFF-001, as described in the MRP (Attachment E), but the results will be used for informational purposes only, not compliance determinations. The performance goals in Table 6 are not water quality-based effluent limitations (WQBELs) and are not enforceable, as such.

Table 6. Performance Goals at Monitoring Location EFF-001[1]

Parameter	Unit	Performance Goals[2,3]			
		6-Month Median	Average Monthly	Maximum Daily	Instantaneous Maximum
OBJECTIVES FOR PROTECTION OF MARINE AQUATIC LIFE					
Arsenic, Total Recoverable	µg/L	1.19E+03	--	6.91E+03	1.83E+04
	lbs/day	1.09E+01	--	6.33E+01	1.68E+02
Cadmium, Total Recoverable	µg/L	2.38E+02	--	9.52E+02	2.38E+03
	lbs/day	2.18E+00	--	8.73E+00	2.18E+01
Chromium (VI), Total Recoverable[4]	µg/L	4.76E+02	--	1.90E+03	4.76E+03
	lbs/day	4.37E+00	--	1.75E+01	4.37E+01

Parameter	Unit	Performance Goals[2,3]			
		6-Month Median	Average Monthly	Maximum Daily	Instantaneous Maximum
Copper, Total Recoverable	µg/L	2.40E+02	--	2.38E+03	6.67E+03
	lbs/day	2.20E+00	--	2.19E+01	6.12E+01
Lead, Total Recoverable	µg/L	4.76E+02	--	1.90E+03	4.76E+03
	lbs/day	4.37E+00	--	1.75E+01	4.37E+01
Mercury, Total Recoverable	µg/L	9.40E+00	--	3.80E+01	9.51E+01
	lbs/day	8.62E-02	--	3.48E-01	8.72E-01
Nickel, Total Recoverable	µg/L	1.19E+03	--	4.76E+03	1.19E+04
	lbs/day	1.09E+01	--	4.37E+01	1.09E+02
Selenium, Total Recoverable	µg/L	3.57E+03	--	1.43E+04	3.57E+04
	lbs/day	3.28E+01	--	1.31E+02	3.28E+02
Silver, Total Recoverable	µg/L	1.29E+02	--	6.28E+02	1.63E+03
	lbs/day	1.18E+00	--	5.77E+00	1.49E+01
Zinc, Total Recoverable	µg/L	2.86E+03	--	1.71E+04	4.57E+04
	lbs/day	2.63E+01	--	1.57E+02	4.19E+02
Cyanide, Total	µg/L	2.38E+02	--	9.52E+02	2.38E+03
	lbs/day	2.18E+00	--	8.73E+00	2.18E+01
Ammonia (expressed as nitrogen)	µg/L	1.43E+05	--	5.71E+05	1.43E+06
	lbs/day	1.31E+03	--	5.24E+03	1.31E+04
Chronic Toxicity[5,6]	"Pass"/ "Fail"	--	"Pass"	--	--
Phenolic Compounds (non-chlorinated)[1]	µg/L	7.14E+03	--	2.86E+04	7.14E+04
	lbs/day	6.55E+01	--	2.62E+02	6.55E+02
Chlorinated Phenolics[1]	µg/L	2.38E+02	--	9.52E+02	2.38E+03
	lbs/day	2.18E+00	--	8.73E+00	2.18E+01
Endosulfan[1]	µg/L	2.14E+00	--	4.28E+00	6.43E+00
	lbs/day	1.97E-02	--	3.93E-02	5.90E-02
Endrin	µg/L	4.76E-01	--	9.52E-01	1.43E+00
	lbs/day	4.37E-03	--	8.73E-03	1.31E-02
HCH (BHC)[1]	µg/L	9.52E-01	--	1.90E+00	2.86E+00
	lbs/day	8.73E-03	--	1.75E-02	2.62E-02
Radioactivity	pCi/L	Not to exceed limits specified in title 17, division 1, chapter 5, subchapter 4, group 3, article 3, section 30253 of the California Code of Regulations, Reference to section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.			
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH – NONCARCINOGENS					
Acrolein	µg/L	--	5.24E+04	--	--
	lbs/day	--	4.80E+02	--	--
Antimony, Total Recoverable	µg/L	--	2.86E+05	--	--
	lbs/day	--	2.62E+03	--	--
Bis(2-chloroethoxy) Methane	µg/L	--	1.05E+03	--	--
	lbs/day	--	9.61E+00	--	--

Parameter	Unit	Performance Goals[2,3]			
		6-Month Median	Average Monthly	Maximum Daily	Instantaneous Maximum
Bis(2-chloroisopropyl) Ether	µg/L	--	2.86E+05	--	--
	lbs/day	--	2.62E+03	--	--
Chlorobenzene	µg/L	--	1.36E+05	--	--
	lbs/day	--	1.24E+03	--	--
Chromium (III), Total Recoverable[4]	µg/L	--	4.52E+07	--	--
	lbs/day	--	4.15E+05	--	--
Di-n-butyl Phthalate	µg/L	--	8.33E+05	--	--
	lbs/day	--	7.64E+03	--	--
Dichlorobenzenes[1]	µg/L	--	1.21E+06	--	--
	lbs/day	--	1.11E+04	--	--
Diethyl Phthalate	µg/L	--	7.85E+06	--	--
	lbs/day	--	7.21E+04	--	--
Dimethyl Phthalate	µg/L	--	1.95E+08	--	--
	lbs/day	--	1.79E+06	--	--
4,6-dinitro-2-methylphenol	µg/L	--	5.24E+04	--	--
	lbs/day	--	4.80E+02	--	--
2,4-dinitrophenol	µg/L	--	9.52E+02	--	--
	lbs/day	--	8.73E+00	--	--
Ethylbenzene	µg/L	--	9.76E+05	--	--
	lbs/day	--	8.95E+03	--	--
Fluoranthene	µg/L	--	3.57E+03	--	--
	lbs/day	--	3.28E+01	--	--
Hexachlorocyclopentadiene	µg/L	--	1.38E+04	--	--
	lbs/day	--	1.27E+02	--	--
Nitrobenzene	µg/L	--	1.17E+03	--	--
	lbs/day	--	1.07E+01	--	--
Thallium, Total Recoverable	µg/L	--	4.76E+02	--	--
	lbs/day	--	4.37E+00	--	--
Toluene	µg/L	--	2.02E+07	--	--
	lbs/day	--	1.86E+05	--	--
Tributyltin	µg/L	--	3.33E-01	--	--
	lbs/day	--	3.06E-03	--	--
1,1,1-trichloroethane	µg/L	--	1.29E+08	--	--
	lbs/day	--	1.18E+06	--	--
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH – CARCINOGENS					
Acrylonitrile	µg/L	--	2.4E+01	--	--
	lbs/day	--	2.2E-01	--	--
Aldrin	µg/L	--	5.2E-03	--	--
	lbs/day	--	4.8E-05	--	--

Parameter	Unit	Performance Goals[2,3]			
		6-Month Median	Average Monthly	Maximum Daily	Instantaneous Maximum
Benzene	µg/L	--	1.4E+03	--	--
	lbs/day	--	1.3E+01	--	--
Benzidine	µg/L	--	1.6E-02	--	--
	lbs/day	--	1.5E-04	--	--
Beryllium, Total Recoverable	µg/L	--	7.9E+00	--	--
	lbs/day	--	7.2E-02	--	--
Bis(2-chloroethyl) Ether	µg/L	--	1.1E+01	--	--
	lbs/day	--	9.8E-02	--	--
Bis(2-ethlyhexyl) Phthalate	µg/L	--	8.3E+02	--	--
	lbs/day	--	7.6E+00	--	--
Carbon Tetrachloride	µg/L	--	2.1E+02	--	--
	lbs/day	--	2.0E+00	--	--
Chlordane[1]	µg/L	--	5.5E-03	--	--
	lbs/day	--	5.0E-05	--	--
Chlorodibromomethane	µg/L	--	2.0E+03	--	--
	lbs/day	--	1.9E+01	--	--
Chloroform	µg/L	--	3.1E+04	--	--
	lbs/day	--	2.8E+02	--	--
Dichlorodiphenyltrichloroethane (DDT)[1]	µg/L	--	4.0E-02	--	--
	lbs/day	--	3.7E-04	--	--
1,4-dichlorobenzene	µg/L	--	4.3E+03	--	--
	lbs/day	--	3.9E+01	--	--
3,3'-dichlorobenzidine	µg/L	--	1.9E+00	--	--
	lbs/day	--	1.8E-02	--	--
1,2-dichloroethane	µg/L	--	6.7E+03	--	--
	lbs/day	--	6.1E+01	--	--
1,1-dichloroethylene	µg/L	--	2.1E+02	--	--
	lbs/day	--	2.0E+00	--	--
Dichlorobromomethane	µg/L	--	1.5E+03	--	--
	lbs/day	--	1.4E+01	--	--
Dichloromethane	µg/L	--	1.1E+05	--	--
	lbs/day	--	9.8E+02	--	--
1,3-dichloropropene	µg/L	--	2.1E+03	--	--
	lbs/day	--	1.9E+01	--	--
Dieldrin	µg/L	--	9.5E-03	--	--
	lbs/day	--	8.7E-05	--	--
2,4-dinitrotoluene	µg/L	--	6.2E+02	--	--
	lbs/day	--	5.7E+00	--	--

Parameter	Unit	Performance Goals[2,3]			
		6-Month Median	Average Monthly	Maximum Daily	Instantaneous Maximum
1,2-diphenylhydrazine	µg/L	--	3.8E+01	--	--
	lbs/day	--	3.5E-01	--	--
Halomethanes[1]	µg/L	--	3.1E+04	--	--
	lbs/day	--	2.8E+02	--	--
Heptachlor	µg/L	--	1.2E-02	--	--
	lbs/day	--	1.1E-04	--	--
Heptachlor Epoxide	µg/L	--	4.8E-03	--	--
	lbs/day	--	4.4E-05	--	--
Hexachlorobenzene	µg/L	--	5.0E-02	--	--
	lbs/day	--	4.6E-04	--	--
Hexachlorobutadiene	µg/L	--	3.3E+03	--	--
	lbs/day	--	3.1E+01	--	--
Hexachloroethane	µg/L	--	6.0E+02	--	--
	lbs/day	--	5.5E+00	--	--
Isophorone	µg/L	--	1.7E+05	--	--
	lbs/day	--	1.6E+03	--	--
N-nitrosodimethylamine	µg/L	--	1.7E+03	--	--
	lbs/day	--	1.6E+01	--	--
N-nitrosodi-N-propylamine	µg/L	--	9.0E+01	--	--
	lbs/day	--	8.3E-01	--	--
N-nitrosodiphenylamine	µg/L	--	6.0E+02	--	--
	lbs/day	--	5.5E+00	--	--
polycyclic aromatic hydrocarbons (PAHs)[1]	µg/L	--	2.1E+00	--	--
	lbs/day	--	1.9E-02	--	--
TCDD Equivalents[1]	µg/L	--	9.3E-07	--	--
	lbs/day	--	8.5E-09	--	--
1,1,2,2-tetrachloroethane	µg/L	--	5.5E+02	--	--
	lbs/day	--	5.0E+00	--	--
Tetrachloroethylene (Tetrachloroethene)	µg/L	--	4.8E+02	--	--
	lbs/day	--	4.4E+00	--	--
Toxaphene	µg/L	--	5.0E-02	--	--
	lbs/day	--	4.6E-04	--	--
Trichloroethylene	µg/L	--	6.4E+03	--	--
	lbs/day	--	5.9E+01	--	--
1,1,2-trichloroethane	µg/L	--	2.2E+03	--	--
	lbs/day	--	2.1E+01	--	--
2,4,6-trichlorophenol	µg/L	--	6.9E+01	--	--
	lbs/day	--	6.3E-01	--	--
Vinyl Chloride	µg/L	--	8.6E+03	--	--
	lbs/day	--	7.9E+01	--	--

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. Scientific "E" notation is used to express certain values. In scientific "E" notation, the number following the "E" indicates that position of the decimal point in the value. Negative numbers after the "E" indicate that the value is less than 1, and positive numbers after the "E" indicate that the value is greater than 1. In this notation, a value of 6.1E-02 represents 6.1×10^{-2} or 0.061, 6.1E+02 represents 6.1×10^{2} or 610, and 6.1E+00 represents 6.1×10^{0} or 6.1.
3. The MER limitations, in lbs/day, were calculated based on the following equation: MER (lbs/day) = 8.34 x Q x C, where Q is the permitted flow for the Facility (1.4 MGD) and C is the concentration (mg/L).
4. The Discharger may, at their option, apply this performance goal as a total chromium performance goal.
5. Applicable to chronic toxicity as specified in section VII.K of this Order and section III.C of the MRP (Attachment E).
6. The chronic toxicity effluent limitation is protective of both the numeric acute and chronic toxicity 2015 Ocean Plan water quality objectives. The effluent limitation will be implemented using *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995), current USEPA guidance in the *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, June 2010) (https://www3.epa.gov/npdes/pubs/wet_final_tst_implementation2010.pdf), and USEPA Regions 8, 9, and 10, Toxicity Training Tool (January 2010).

B. Land Discharge Specifications – Not Applicable

C. Recycling Specifications – Not Applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitation

The receiving water limitations set forth below for ocean waters are based on water quality objectives contained in the Basin Plan and Ocean Plan and are a required part of this Order. The discharge of waste shall not cause or contribute to violation of these limitations in the Pacific Ocean. Compliance with these limitations shall be determined from samples collected at stations representative of the area outside of the zone of initial dilution (ZID).

1. Bacterial Characteristics

a. Within a zone bounded by the shoreline and a distance of three nautical miles from the shoreline, including all kelp beds, the following bacterial objectives shall be maintained throughout the water column. The ZID for the ocean outfall is excluded.

i. 30-day Geometric Mean – The following standards are based on the geometric mean of the five most recent samples from each site:

(a) Total coliform density (colony forming units, CFU) shall not exceed 1,000 per 100 milliliter (ml);

(b) Fecal coliform density (CFU) shall not exceed 200 per 100 ml; and

(c) Enterococcus density (CFU) shall not exceed 35 per 100 ml.

ii. Single Sample Maximum:

(a) Total coliform density (CFU) shall not exceed 10,000 per 100 ml;

(b) Fecal coliform density (CFU) shall not exceed 400 per 100 ml;

(c) Enterococcus density (CFU) shall not exceed 104 per 100 ml; and

(d) Total coliform density (CFU) shall not exceed 1,000 per 100 ml when the fecal coliform/total coliform ratio exceeds 0.1.

b. The ZID of any wastewater outfall shall be excluded from designation as kelp beds for purposes of bacterial standards. Adventitious assemblages of kelp plants on

waste discharge structures (e.g., outfall pipes and diffusers) do not constitute kelp beds for purposes of bacterial standards.

c. At all areas where shellfish may be harvested for human consumption, as determined by the San Diego Water Board, the median total coliform density (CFU) shall not exceed 70 per 100 ml throughout the water column, and not more than 10 percent of the samples shall exceed 230 per 100 ml.

2. Physical Characteristics

a. Floating particulates and grease and oils shall not be visible.

b. The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface.

c. Natural light shall not be significantly reduced at any point outside the ZID as a result of the discharge of waste.

d. The rate of deposition of inert solids and the characteristics of inert solids in the ocean sediments shall not be changed such that benthic communities are degraded.

e. Trash shall not be present in ocean waters, along shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance.

3. Chemical Characteristics

a. The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste materials.

b. The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.

c. The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions.

d. The concentration of substances set forth in Chapter II, Table 1 of the Ocean Plan shall not be increased in marine sediments to levels that would degrade indigenous biota.

e. The concentration of organic materials in marine sediments shall not be increased to levels that would degrade marine life.

f. Nutrient materials shall not cause objectionable aquatic growths or degrade indigenous biota.

g. Numerical water quality objectives established in Chapter II, Table 1 of the Ocean Plan apply to all discharges within the jurisdiction of the Ocean Plan. Unless otherwise specified, all metal concentrations are expressed as total recoverable concentrations.

4. Biological Characteristics

a. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded.

b. The natural taste, odor, color of fish, shellfish, or other marine resources used for human consumption shall not be altered.

c. The concentration of organic materials in fish, shellfish, or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health.

5. Radioactivity

Discharge of radioactive waste shall not degrade marine life.

6. Elevated Temperature Requirements (Thermal Plan)

a. Elevated temperature waste shall be discharged to the open ocean away from the shoreline to achieve dispersion through the vertical water column.

b. Elevated temperature wastes shall be discharged a sufficient distance from areas of special biological significance to assure the maintenance of natural temperature in these areas.

c. The maximum temperature of thermal waste discharges shall not exceed the natural temperature of receiving waters by more than 20°F.

d. The discharge of elevated temperature wastes shall not result in increases in the natural water temperature exceeding 4 degrees Fahrenheit (°F) at (a) the shoreline, (b) the surface of any ocean substrate, or (c) the ocean surface beyond 1,000 feet from the discharge system. The surface temperature limitation shall be maintained at least 50 percent of the duration of any complete tidal cycle.

e. Additional limitations shall be imposed when necessary to assure protection of beneficial uses.

B. Groundwater Limitations – Not Applicable

VI. PROVISIONS

A. Standard Provisions

1. **Federal Standard Provisions.** The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.

2. **San Diego Water Board Standard Provisions.** The Discharger shall comply with the following provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply.

   a. The expiration date of this Order is contained in Table 3 of this Order. After the expiration date, the terms and conditions of this Order are automatically continued pending issuance of a new permit, provided that all requirements of USEPA's NPDES regulations at 40 CFR section 122.6 and the State's regulations at title 23, division 3, chapter 9, article 3, section 2235.4 of the CCR regarding the continuation of expired permits and WDRs are met.

   b. A copy of this Order shall be posted at a prominent location and shall be available to site personnel, San Diego Water Board, State Water Resources Control Board (State Water Board), and USEPA or their authorized representative at all times.

B. Monitoring and Reporting Program (MRP) Requirements

1. The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E.

2. Notifications required to be provided under this Order to the San Diego Water Board shall be made to:

E-mail – SanDiego@waterboards.ca.gov, or
Telephone – (619) 516-1990, or
Facsimile – (619) 516-1994.

C. Special Provisions

1. Reopener Provisions

a. This Order may be reopened for modification to include an effluent limitation if monitoring establishes that the discharge causes, has the reasonable potential to cause, or contributes to an excursion above a performance goal(s) set forth in section IV.A.2 of this Order or as otherwise described in Table 1 of the Ocean Plan. (40 CFR section 122.44(d)(1))

b. This Order may be reopened for modification of the monitoring and reporting requirements and/or special studies requirements, at the discretion of the San Diego Water Board. Such modification(s) may include, but is (are) not limited to, revision(s) (i) to implement recommendations from Southern California Coastal Water Research Project (SCCWRP); (ii) to develop, refine, implement, and/or coordinate a regional monitoring program; (iii) to develop and implement improved monitoring and assessment programs in keeping with San Diego Water Board Resolution No. R9-2012-0069, *Resolution in Support of a Regional Monitoring Framework*; and/or (iv) to add provisions to require the Discharger to evaluate and provide information on cost and values of the MRP (Attachment E).

c. This Order may be modified, revoked and reissued, or terminated for cause in accordance with the provisions of 40 CFR parts 122, 124, and 125 at any time prior to its expiration under any of the following circumstances:

   i. Violation of any terms or conditions of this Order (Water Code section 13381(a));

   ii. Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts (Water Code section 13381(b)); and

   iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge (Water Code section 13381(c)).

d. The filing of a request by the Discharger for modifications, revocation and reissuance, or termination of this Order does not stay any condition of this Order. Notification by the Discharger of planned operational or facility changes or anticipated noncompliance with this Order does not stay any condition of this Order. (40 CFR section 122.41(f))

e. If any applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under CWA section 307(a) for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in this Order, the San Diego Water Board may institute proceedings under these regulations to modify or revoke and reissue this Order to conform to the toxic effluent standard or prohibition. (40 CFR section 122.44(b)(1))

f. This Order may be reopened and modified for consistency with any new or modified water quality control plan, policy, law, or regulation. (40 CFR section 122.62(a)(3).)

g. This Order may be reopened and modified to revise effluent limitations as a result of Ocean Plan, Basin Plan, and/or other statewide Water Quality Control Plan amendments; or the adoption of a total maximum daily load (TMDL) for the receiving water. (40 CFR section 122.62(a)(2))

h. This Order may be reopened upon submission by the Discharger of adequate information, as determined by the San Diego Water Board, to provide for dilution credits or a mixing zone, as may be appropriate. (40 CFR section 122.62(a)(2))

i. This Order may also be reopened and modified, revoked and reissued, or terminated in accordance with the provisions of 40 CFR sections 122.44, 122.62 to 122.64, and 125.62. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this Order, and endangerment to human health or the environment resulting from the permitted activity.

j. The mass emission performance goals, contained in section IV.A.2 of this Order, may be re-evaluated and modified during this Order term, or this Order may be modified to incorporate WQBELs, in accordance with the requirements set forth at 40 CFR sections 122.62 and 124.5.

2. Special Studies, Technical Reports, and Additional Monitoring Requirements – Not Applicable

3. Best Management Practices and Pollution Prevention – Not Applicable

4. Construction, Operation and Maintenance Specifications

a. The Facility shall be protected against a 100-year peak stream flows as defined by the San Diego County Flood Control District (FCD).

b. The Facility shall be protected against erosion, overland runoff, and other impacts resulting from a 100-year, 24-hour storm event as defined by the San Diego County FCD.

5. Special Provisions for Publicly-Owned Treatment Works (POTWs) – Not Applicable

6. Other Special Provisions – Not Applicable

7. Compliance Schedules – Not Applicable

VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in section IV.A of this Order shall be determined as specified below:

A. Compliance with 30-day Average

If the median of daily discharges over any 30-day period exceeds the 30-day average effluent limitation for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for each day of that 30-day period for that parameter. The next assessment of compliance will occur after the next sample is taken. If only a single sample is taken during a given 30-day period and the analytical result for that sample exceeds the 30-day average effluent limitation, the Discharger will be considered out of compliance for the 30-day period. For any 30-day period during which no sample is taken, no compliance determination can be made for the 30-day average effluent limitation.

B. Compliance with Average Monthly Effluent Limitation (AMEL)

If the average of daily discharges over a calendar month exceeds the AMEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of

compliance for each day of that month for that parameter (e.g., resulting in 31 days of noncompliance in a 31-day month). The average of daily discharges over the calendar month that exceeds the AMEL for a parameter will be considered out of compliance for that month only. If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

C. Compliance with Average Weekly Effluent Limitation (AWEL)

If the average of daily discharges over a calendar week (Sunday through Saturday) exceeds the AWEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for each day of that week for that parameter, resulting in seven days of noncompliance. The average of daily discharges over the calendar week that exceeds the AWEL for a parameter will be considered out of compliance for that week only. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the Discharger will be considered out of compliance for that calendar week. For any one calendar week during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar week.

D. Compliance with Maximum Daily Effluent Limitation (MDEL)

The MDEL shall apply to flow weighted 24-hour composite samples, or grab samples, as specified in the MRP (Attachment E). If a daily discharge exceeds the MDEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for that parameter for that one day only within the reporting period. For any one day during which no sample is taken, no compliance determination can be made for that day.

E. Compliance with Instantaneous Minimum Effluent Limitation

The instantaneous minimum effluent limitation shall apply to grab sample determinations. If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of noncompliance with the instantaneous minimum effluent limitation).

F. Compliance with Instantaneous Maximum Effluent Limitation

The instantaneous maximum effluent limitation shall apply to grab sample determinations. If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of noncompliance with the instantaneous maximum effluent limitation).

G. Compliance with 6-Month Median Effluent Limitation

If the median of daily discharges over any 180-day period exceeds the 6-month median effluent limitation for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for each day of that 180-day period for that parameter. The next assessment of compliance will occur after the next sample is taken. If only a single sample is taken during a given 180-day period and the analytical result for that sample exceeds the 6-month median effluent limitation, the Discharger will be considered out

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of compliance for the 180-day period. For any 180-day period during which no sample is taken, no compliance determination can be made for the 6-month median effluent limitation.

H. Mass- and Concentration-based Limitations

Compliance with mass- and concentration-based effluent limitations for the same parameter shall be determined separately with their respective limitations. When the concentration of a constituent in an effluent sample is determined to be "Not Detected" (ND) or "Detected, but Not Quantified" (DNQ), the corresponding MER determined from that sample concentration shall also be reported as "ND" or "DNQ."

I. Ocean Plan Provisions for Table 1 Constituents

Sufficient sampling and analysis shall be required to determine compliance with the effluent limitations.

1. Compliance with Single-constituent Effluent Limitations

The Discharger shall be deemed out of compliance with an effluent limitation or discharge specification if the concentration of the constituent in the monitoring sample is greater than the effluent limitation or discharge specification and greater than or equal to the minimum level (ML).

2. Compliance with Effluent Limitations Expressed as a Sum of Several Constituents

The Discharger is out of compliance with an effluent limitation that applies to the sum of a group of chemicals (e.g., PCBs) if the sum of the individual pollutant concentrations is greater than the effluent limitation. Individual pollutants of the group will be considered to have a concentration of zero if the constituent is reported as ND or DNQ.

3. Multiple Sample Data Reduction

The concentration of the pollutant in the effluent may be estimated from the result of a single sample analysis or by a measure of central tendency (arithmetic mean, geometric mean, median, etc.) of multiple sample analyses when all sample results are quantifiable (i.e., greater than or equal to the reported ML). When one or more sample results are reported as ND or DNQ, the central tendency concentration of the pollutant shall be the median (middle) value of the multiple samples. If, in an even number of samples, one or both of the middle values is ND or DNQ, the median will be the lower of the two middle values.

4. Mass Emission Rate (MER)

The MER, in pounds per day, shall be obtained from the following calculation for any calendar day:

MER (lbs/day) = 8.34 x Q x C

In which Q and C are the flow rate in MGD and the constituent concentration in mg/L, respectively, and 8.34 is a conversion factor (lbs/gallon of water). If a composite sample is taken, then C is the concentration measured in the composite sample and Q is the average flow rate occurring during the period over which the samples are composited.

J. Bacterial Standards and Analysis

1. The geometric mean used for determining compliance with bacterial standards is calculated with the following equation:

   Geometric Mean = (C1 x C2 x … x Cn)1/n

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Where n is the number of days samples were collected during the period and C is the concentration of bacteria (CFU/100 ml) found on each day of sampling.

2. For all bacterial analyses, sample dilutions should be performed so the range of values extends from 2 to 16,000 CFU/100 ml. The detection methods used for each analysis shall be reported with the results of the analysis. Detection methods used for coliforms (total and fecal) shall be those listed in 40 CFR part 136 or any improved method determined by the San Diego Water Board (and approved by USEPA) to be appropriate. Detection methods used for enterococcus shall be those presented in USEPA publication USEPA 600/4-85/076, *Test Methods for Escherichia coli and Enterococci in Water by Membrane Filter Procedure*, listed under 40 CFR part 136, and any other method approved by the San Diego Water Board.

K. Chronic Toxicity

The discharge is subject to determination of "Pass" or "Fail" from a chronic toxicity test using the Test of Significant Toxicity (TST) statistical t-test approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1 and Table A-1, and Appendix B, Table B-1. The null hypothesis (Ho) for the TST statistical approach is:

Mean discharge "in-stream" waste concentration (IWC) response ≤0.75 × Mean control response.

A test result that rejects this null hypothesis is reported as "Pass." A test result that does not reject this null hypothesis is reported as "Fail." This is a t-test (formally Student's t-test), a statistical analysis comparing two sets of replicate observations—in the case of whole effluent toxicity (WET) test, only two test concentrations (i.e., a control and IWC). The purpose of this statistical test is to determine if the means of the two sets of observations are different (i.e., if the IWC or receiving water concentration differs from the control (the test result is "Pass" or "Fail")). The Welch's t-test employed by the TST statistical approach is an adaptation of Student's t-test and is used with two samples having unequal variances.

The performance goal for chronic toxicity is exceeded when a chronic toxicity test, analyzed using the TST statistical approach, results in "Fail."

The performance goal for chronic toxicity is set at the IWC for the discharge (0.42% effluent[1]) and expressed in units of the TST statistical approach ("Pass" or "Fail"). All monitoring for the performance goal for chronic toxicity shall be reported using the IWC effluent concentration and negative control, expressed in units of the TST. The TST hypothesis (Ho) (see above) is statistically analyzed using the IWC and a negative control. Effluent toxicity tests shall be run using *Short-Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine Estuarine Organisms* (EPA/600/R-95/136, 1995). The San Diego Water Board's review of reported toxicity test results will include review of concentration-response patterns as appropriate (see section IV.C.5 of the Fact Sheet (Attachment F)). As described in the laboratory audit directives to the San Jose Creek Water Quality Laboratory from the State Water Board dated August 07, 2014, and from USEPA dated December 24, 2013, the Percent Minimum Significant Difference (PMSD) criteria only apply to compliance reporting for the no-observed-effect-concentration (NOEC) and the sublethal statistical endpoints of the NOEC, and therefore are not used to interpret TST results. Standard operating procedures (SOPs) used by the toxicity testing laboratory to identify and report valid, invalid, anomalous, or inconclusive effluent (and receiving water) toxicity test measurement results from the TST statistical approach, including those that

[1] IWC = 1/minimum initial dilution factor (Dm) = 1/237 = 0.0042 = 0.42%

incorporate a consideration of concentration-response patterns, must be submitted to the San Diego Water Board (40 CFR section 122.41(h)). The San Diego Water Board will make a final determination as to whether a toxicity test result is valid, and may consult with the Discharger, USEPA, the State Water Board's Quality Assurance (QA) Officer, or the State Water Board, Division of Drinking Water (DDW) Environmental Laboratory Accreditation Program (ELAP) as needed.

ATTACHMENT A – DEFINITIONS

Part 1. – Abbreviations

Abbreviation	Definition
40 CFR	Title 40 of the Code of Federal Regulations
AMEL[1]	Average Monthly Effluent Limitation
AQUA	Aquaculture
ASBS[1]	Areas of Special Biological Significance
AWEL[1]	Average Weekly Effluent Limitation
Basin Plan	Water Quality Control Plan for the San Diego Basin
BAT	Best available Technology Economically Achievable
BCT	Best Conventional Pollutant Control Technology
BIOL	Preservation of Biological Habitats of Special Significance
BOD_5	Biochemical Oxygen Demand (5-day @ 20°C)
BPJ	Best Professional Judgement
BPT	Best Practicable Treatment Control Technology
°C	Degrees Celsius
CAISO	California Independent System Operator
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CEC	California Energy Commission
CFR	Code of Federal Regulations
CFU	Colony Forming Units
CIWQS	California Integrated Water Quality System
COMM	Commercial and Sport Fishing
CTG	Combustion Turbine Generators
CWA	Clean Water Act
DDT[1]	Dichlorodiphenyltrichloroethane
DDW	Division of Drinking Water
DEI	Deionization Systems
Discharger	San Diego Gas and Electric Company
Dm	Initial Dilution
DMR	Discharge Monitoring Report
DNQ[1]	Detected, but Not Quantified
EC25	Effects Concentration at 25 Percent
ELAP	Environmental Laboratory Accreditation Program
ELGs	Effluent Limitations, Guidelines and Standards
ELO	Escondido Land Outfall
ERTC	Escondido Research and Technology Center
eSMR	Electronic Self-Monitoring Reports
°F	Degrees Fahrenheit
Facility	Palomar Energy Center
FCD	Flood Control District
HARRF	Hale Avenue Resource Recovery Facility
HCH[1]	Hexachlorocyclohexane, also known as BHC
Ho	Hypothesis
HRSG	Heat Recovery Steam Generator
IBCS	Industrial Brine Collection System
IND	Industrial Service Supply

Abbreviation	Definition
IUD	Industrial User Discharge
IWC[1]	"In-Stream" Waste Concentration
lbs/day	Pounds per Day
LC	Lethal Concentration
LC 50	Percent Waste Giving 50 Percent Survival of Test Organisms
MAR	Marine Habitat
MDEL[1]	Maximum Daily Effluent Limitation
MDL[1]	Method Detection Limit
MEC	Maximum Effluent Concentration
MER	Mass Emission Rate
MFRO Facility	Membrane Filtration/Reverse Osmosis Facility
mg/kg	Milligram per Kilogram
mg/L	Milligrams per Liter
MGD	Million Gallons per Day
MIGR	Migration of Aquatic Organisms
ML[1]	Minimum Level
ml	Milliliter
ml/L	Milliliters per Liter
MRP	Monitoring and Reporting Program
MW	Megawatt
NAV	Navigation
ND	Not Detected
ng/L	Nanogram per Liter
NOEC	No-Observed-Effect-Concentration
NOEL	No Observed Effect Level
NPDES	National Pollutant Discharge Elimination System
NSPS	New Source Performance Standards
NTU	Nephelometric Turbidity Unit
Ocean Plan	California Ocean Plan, Water Quality Control Plan Ocean Waters Of California
PAH[1]	Polynuclear Aromatic Hydrocarbons
PCB[1]	Polychlorinated Biphenyl
pCi/L	Picocuries per Liter
PEC	Palomar Energy Center
PMSD	Percent Minimum Significant Difference
POTWs	Publicly-Owned Treatment Works
ppt	Parts per Thousand
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
RARE	Rare, Threatened, or Endangered Species
REC-1	Contact Water Recreation
REC-2	Non-Contact Water Recreation
RL	Reporting Level
RMR	Reliability-Must-Run
RO	Reverse Osmosis
ROWD	Report of Waste Discharge
RPA	Reasonable Potential Analysis
San Diego Water Board	California Regional Water Quality Control Board, San Diego Region

Abbreviation	Definition
SCCWRP	Southern California Coastal Waters Research Project
SDS	Safety Data Sheets
SEOO	San Elijo Ocean Outfall
SHELL	Shellfish Harvesting
SMR	Self-Monitoring Report
SOPs	Standard Operating Procedures
SPWN	Spawning, Reproduction, and/or Early Development
SSM Rule	Sufficiently Sensitive Methods Rule
State Water Board	State Water Resources Control Board
STG	Steam Turbine-Generator
TAC	Test Acceptability Criteria
TBELs	Technology-Based Effluent Limitations
TCDD[1]	Tetrachlorodibenzodioxin
TIE[1]	Toxicity Identification Evaluation
TMDL	Total Maximum Daily Load
TRE[1]	Toxicity Reduction Evaluation
TSD	Technical Support Document
TSS	Total Suspended Solids
TST	Test of Significant Toxicity
TUa	Toxic Units Acute
TUc	Toxic Units Chronic
UF	Ultra-Filters
µg	Microgram
µg/kg	Microgram per Kilogram
µg/L	Microgram per Liter
UM3	USEPA Modeling Application Visual Plumes
U.S.C.	United States Code
U.S.	United States
USEPA	United Stated Environmental Protection Agency
Water Code	California Water Code
WDRs	Waste Discharge Requirements
WET	Whole Effluent Toxicity
WILD	Wildlife Habitat
WQBELs	Water Quality-Based Effluent Limitations
ZID	Zone of Initial Dilution

1. See Part 2 of Attachment A (Glossary of Common Terms) for further definition.

Part 2. – Glossary of Common Terms

30-day average
The arithmetic mean of pollutant parameter values of samples collected in a period of 30 consecutive days.

Areas of Special Biological Significance (ASBS)
Those areas designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. All Areas of Special Biological Significance are also classified as a subset of State Water Quality Protection Areas.

Average Concentration
The term average concentration as it relates to chlorine discharge means the average of analyses made over a single period of chlorine release which does not exceed two hours. (40 CFR 423.11(k))

Average Monthly Effluent Limitation (AMEL)
The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL)
The highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Beneficial Uses
The uses of water necessary for the survival or well being of man, plants, and wildlife. These uses of water serve to promote the tangible and intangible economic, social, and environmental goals. "Beneficial Uses" of the waters of the State that may be protected against include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. In the *Water Quality Control Plan for the San Diego Basin* (Basin Plan), existing beneficial uses are uses that were attained in the surface or ground water on or after November 28, 1975; and potential beneficial uses are uses that would probably develop in future years through the implementation of various control measures. "Beneficial Uses" are equivalent to "Designated Uses" under federal law. [California Water Code section 13050(f)].

Best Management Practices (BMPs)
Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the U.S. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Bioassay
A test used to evaluate the relative potency of a chemical or a mixture of chemicals by comparing its effect on a living organism with the effect of a standard preparation on the same type of organism.

Biosolids
Nutrient-rich organic materials resulting from the treatment of sewage sludge. When treated and processed, sewage sludge becomes biosolids which can be safely recycled and applied as fertilizer to sustainably improve and maintain productive soils and stimulate plant growth.

Blowdown
The term blowdown means the minimum discharge of recirculating water for the purpose of discharging materials contained in the water, the further buildup of which would cause concentration in amounts exceeding limits established by best engineering practices. (40 CFR 423.11(j))

Brine
The byproduct of desalinated water having a salinity concentration greater than a desalination facility's intake source water.

Bypass
The intentional diversion of waste streams from any portion of a treatment facility. (40 CFR section 122.41(m)(1)(i).)

Chlordane
Shall mean the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

Chronic Toxicity
This parameter shall be used to measure the acceptability of waters for supporting a healthy marine biota until improved methods are developed to evaluate biological response.

a. Chronic Toxicity (TUc)
   Expressed as Toxic Units Chronic (TUc)

$$TUc = \frac{100}{NOEL}$$

b. No Observed Effect Level (NOEL)

The NOEL is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism, as determined by the result of a critical life stage toxicity test listed in Ocean Plan Appendix II.

Chlorinated Phenolics
The sum of 4-chloro-3-methylphenol, 2-chlorophenol, pentachlorophenol, 2,4,5-trichlorophenol, and 2,4,6-trichlorophenol.

Composite Sample
A composite sample is defined as a combination of at least eight sample aliquots of at least 100 ml, collected at periodic intervals during the operating hours of a facility over a 24-hour period. For volatile pollutants, aliquots must be combined in the laboratory immediately before analysis. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically. The 100-ml minimum volume of an aliquot does not apply to automatic self-purging samplers. If one day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Daily Discharge
Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass; or (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

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The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

A composite sample is defined as a combination of at least eight sample aliquots of at least 100 ml, collected at periodic intervals during the operating hours of a facility over a 24-hour period. For volatile pollutants, aliquots must be combined in the laboratory immediately before analysis. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically. The 100-ml minimum volume of an aliquot does not apply to automatic self-purging samplers. If one day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

A grab sample is an individual sample of at least 100 ml collected at a randomly selected time over a period not exceeding 15 minutes.

Degrade
Degradation shall be determined by comparison of the waste field and reference site(s) for characteristic species diversity, population density, contamination, growth anomalies, debility, or supplanting of normal species by undesirable plant and animal species. Degradation occurs if there are significant differences in any of three major biotic groups, namely, demersal fish, benthic invertebrates, or attached algae. Other groups may be evaluated where benthic species are not affected, or are not the only ones affected.

Desalination Facility
An industrial facility that processes water to remove salts and other components from the source water to produce water that is less saline than the source water.

Detected, but Not Quantified (DNQ)
Sample results that are less than the reported ML, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

Dichlorobenzenes
Shall mean the sum of 1,2- and 1,3-dichlorobenzene.

Dichlorodiphenyltrichloroethane (DDT)
Shall mean the sum of 4,4'DDT, 2,4'DDT, 4,4'DDE, 2,4'DDE, 4,4'DDD, and 2,4'DDD.

Dilution Credit
The amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

Discharge
Discharge of a pollutant means: (a) Any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or (b) Any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channelled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any "indirect discharger."

Discharge Monitoring Reports (DMRs)
The DMRs means the Environmental Protection Agency (EPA) uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees. DMRs must be used by "approved States" as well as by EPA. EPA will supply DMRs to any approved State upon request. The EPA national forms may be modified to substitute the State agency name, address, logo, and other similar information, as appropriate, in place of EPA's.

Downstream Ocean Waters
Waters downstream with respect to ocean currents.

Dredged Material
Any material excavated or dredged from the navigable waters of the U.S., including material otherwise referred to as "spoil."

Enclosed Bays
Indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. This definition includes but is not limited to: Humboldt Bay, Bodega Harbor, Tomales Bay, Drakes Estero, San Francisco Bay, Morro Bay, Los Angeles Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay.

Endosulfan
The sum of endosulfan-alpha and -beta and endosulfan sulfate.

Estuaries and Coastal Lagoons
Estuaries and Coastal Lagoons are waters at the mouths of streams that serve as mixing zones for fresh and ocean waters during a major portion of the year. Mouths of streams that are temporarily separated from the ocean by sandbars shall be considered as estuaries. Estuarine waters will generally be considered to extend from a bay or the open ocean to the upstream limit of tidal action but may be considered to extend seaward if significant mixing of fresh and salt water occurs in the open coastal waters. The waters described by this definition include but are not limited to the Sacramento-San Joaquin Delta as defined by Section 12220 of the California Water Code, Suisun Bay, Carquinez Strait downstream to Carquinez Bridge, and appropriate areas of the Smith, Klamath, Mad, Eel, Noyo, and Russian Rivers.

Facility
Palomar Energy Center

Free Available Chlorine
The term free available chlorine means the value obtained using any of the "chlorine—free available" methods in Table IB in 40 CFR 136.3(a) where the method has the capability of measuring free available chlorine, or other methods approved by the permitting authority. (40 CFR 423.11(l))

Grab Sample
An individual sample of at least 100 milliliters collected at a randomly selected time over a period not exceeding 15 minutes. The sample is taken from a waste stream on a one-time basis without consideration of the flow rate of the waste stream and without consideration of time of day.

Halomethanes
The mean the sum of bromoform, bromomethane (methyl bromide) and chloromethane (methyl chloride).

HCH
The mean the sum of the alpha, beta, gamma (lindane) and delta isomers of hexachlorocyclohexane. Also known as BHC.

Indicator Bacteria
Includes total coliform bacteria, fecal coliform bacteria (or E. coli), and/or Enterococcus bacteria.

Initial Dilution
The process that results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge.

For a submerged buoyant discharge, characteristic of most municipal and industrial wastes that are released from the submarine outfalls, the momentum of the discharge and its initial buoyancy act together to produce turbulent mixing. Initial dilution in this case is completed when the diluting wastewater ceases to rise in the water column and first begins to spread horizontally.

For shallow water submerged discharges, surface discharges, and non-buoyant discharges, characteristic of cooling water wastes and some individual discharges, turbulent mixing results primarily from the momentum of discharge. Initial dilution, in these cases, is considered to be completed when the momentum induced velocity of the discharge ceases to produce significant mixing of the waste, or the diluting plume reaches a fixed distance from the discharge to be specified by the San Diego Water Board, whichever results in the lower estimate for initial dilution.

Instantaneous Maximum Effluent Limitation
The highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation
The lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

In-stream Waste Concentration (IWC)
The concentration of a toxicant of effluent in the receiving water after mixing (the inverse of the dilution factor). A discharge of 100% effluent will be considered the IWC whenever mixing zones or dilution credits are not authorized by the applicable Water Board.

Kelp Beds
For purposes of the bacteriological standards of the Ocean Plan, kelp beds are significant aggregations of marine algae of the genera Macrocystis and Nereocystis. Kelp beds include the total foliage canopy of Macrocystis and Nereocystis plants throughout the water column.

Low Volume Waste Sources
The term low volume waste sources means, taken collectively as if from one source, wastewater from all sources except those for which specific limitations or standards are otherwise established in this Order. Low volume waste sources include, but are not limited to, the following: Wastewaters from ion exchange water treatment systems, water treatment evaporator blowdown, laboratory and sampling streams, boiler blowdown, floor drains, cooling tower basin cleaning wastes, recirculating house service water systems, and wet scrubber air pollution control systems whose primary purpose is particulate removal. Sanitary wastes, air conditioning wastes, and wastewater from carbon capture or sequestration systems are not included in this definition. (40 CFR 423.11(b))

Mariculture
The culture of plants and animals in marine waters independent of any pollution source.

Material
(a) In common usage: (1) the substance or substances of which a thing is made or composed (2) substantial; (b) For purposes of the Ocean Plan relating to waste disposal, dredging and the disposal of dredged material and fill, MATERIAL means matter of any kind or description which is subject to regulation as waste, or any material dredged from the navigable waters of the U.S. See also, DREDGED MATERIAL.

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Maximum Daily Effluent Limitation (MDEL)
The highest allowable daily discharge of a pollutant.

Method Detection Limit (MDL)
The minimum concentration of a substance that can be reported with 99 percent confidence that the measured concentration is distinguishable from method blank results, as defined in 40 CFR part 136, Attachment B.

Minimum Level (ML)
The concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Multiport Diffusers
Linear structures consisting of spaced ports or nozzles that are installed on submerged marine outfalls and enable rapid mixing, dispersal, and dilution of brine within a relatively small area.

Natural Light
Reduction of natural light may be determined by the San Diego Water Board by measurement of light transmissivity or total irradiance, or both, according to the monitoring needs of the San Diego Water Board.

Not Detected (ND)
Those sample results less than the laboratory's MDL.

Nuisance
Water Code section 13050, subdivision (m), defines nuisance as anything which meets all of the following requirements:

1. Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.
2. Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.
3. Occurs during, or as a result of, the treatment or disposal of wastes.

Ocean Waters
The territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. If a discharge outside the territorial waters of the State could affect the quality of the waters of the State, the discharge may be regulated to assure no violation of the Ocean Plan will occur in ocean waters.

Percent Removal
A percentage expression of the removal efficiency across a treatment plant for a given pollutant parameter, as determined from the average values of the raw wastewater influent pollutant concentrations to the facility and the average values of the effluent pollutant concentrations for a given time period.

PAHs (polynuclear aromatic hydrocarbons)
The sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.

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PCBs (polychlorinated biphenyls)
The sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260.

Phenolic Compounds (non-chlorinated)
The sum of 2,4-dimethylphenol, 4,6-Dinitro-2-methylphenol, 2, 4-dinitrophenol, 2-methylphenol, 4-methylphenol, 2-nitropheneol, 4-nitrophenol, and phenol.

Pollutant
Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 United States Code (U.S.C.) 2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. It does not mean: (a) Sewage from vessels; or (b) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well used either to facilitate production or for disposal purposes is approved by authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.

Recycled Water
Recycled water means water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource.

Reported Minimum Level (ML)
The reported ML (also known as the Reporting Level or RL) is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order, including an additional factor if applicable as discussed herein. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the San Diego Water Board either from Appendix II of the Ocean Plan in accordance with section III.C.5.a. of the Ocean Plan or established in accordance with section III.C.5.b. of the Ocean Plan. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the reported ML.

Salinity
A measure of the dissolved salts in a volume of water. Salinity shall be measured using a standard method approved by the Regional Water Board (e.g., Standard Method 2520 B, EPA Method 120.1, EPA Method 160.1) and reported in parts per thousand. For historical salinity data not recorded in parts per thousand, the Regional Water Board may accept converted data at their discretion.

Seawater
Salt water that is in or from the ocean. For implementation of Chapter III.M of the Ocean Plan, seawater includes tidally influenced waters in coastal estuaries and coastal lagoons and underground salt water beneath the seafloor, beach, or other contiguous land with hydrologic connectivity to the ocean.

Severe Property Damage
Substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR section 122.41(m)(1)(ii))

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Shellfish
Organisms identified by the California Department of Health Services as shellfish for public health purposes (i.e., mussels, clams and oysters).

Significant Difference
Defined as a statistically significant difference in the means of two distributions of sampling results at the 95 percent confidence level.

Six-Month Median Effluent Limitation
The highest allowable moving median of all daily discharges for any 180-day period.

Sludge
Any solid, semisolid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar characteristics and effect.

State Water Quality Protection Areas (SWQPAs)
Non-terrestrial marine or estuarine areas designated to protect marine species or biological communities from an undesirable alteration in natural water quality. All Areas of Special Biological Significance (ASBS) that were previously designated by the State Water Board in Resolutions 74-28, 74-32, and 75-61 are now also classified as a subset of State Water Quality Protection Areas and require special protections afforded by the Ocean Plan.

TCDD Equivalents (Tetrachlorodibenzodioxin Equivalents)
The sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below.

Isomer Group	Toxicity Equivalence Factor
2,3,7,8-tetra CDD	1.0
2,3,7,8-penta CDD	0.5
2,3,7,8-hexa CDDs	0.1
2,3,7,8-hepta CDD	0.01
octa CDD	0.001
2,3,7,8 tetra CDF	0.1
1,2,3,7,8 penta CDF	0.05
2,3,4,7,8 penta CDF	0.5
2,3,7,8 hexa CDFs	0.1
2,3,7,8 hepta CDFs	0.01
octa CDF	0.001

Thirty-Day Average
See 30-day average above for definition of this term.

Total Residual Chlorine
The term total residual chlorine (or total residual oxidants for intake water with bromides) means the value obtained using any of the "chlorine—total residual" methods in Table IB in 40 CFR 136.3(a), or other methods approved by the permitting authority (40 CFR 423.11(a))

Toxicity Identification Evaluation (TIE)
A set of procedures conducted to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.

Toxicity Reduction Evaluation (TRE)
A study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A TIE may be required as part of the TRE, if appropriate.

Trash
Trash means all improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

Waste
As used in the Ocean Plan, waste includes a Discharger's total discharge, of whatever origin, i.e., gross, not net, discharge.

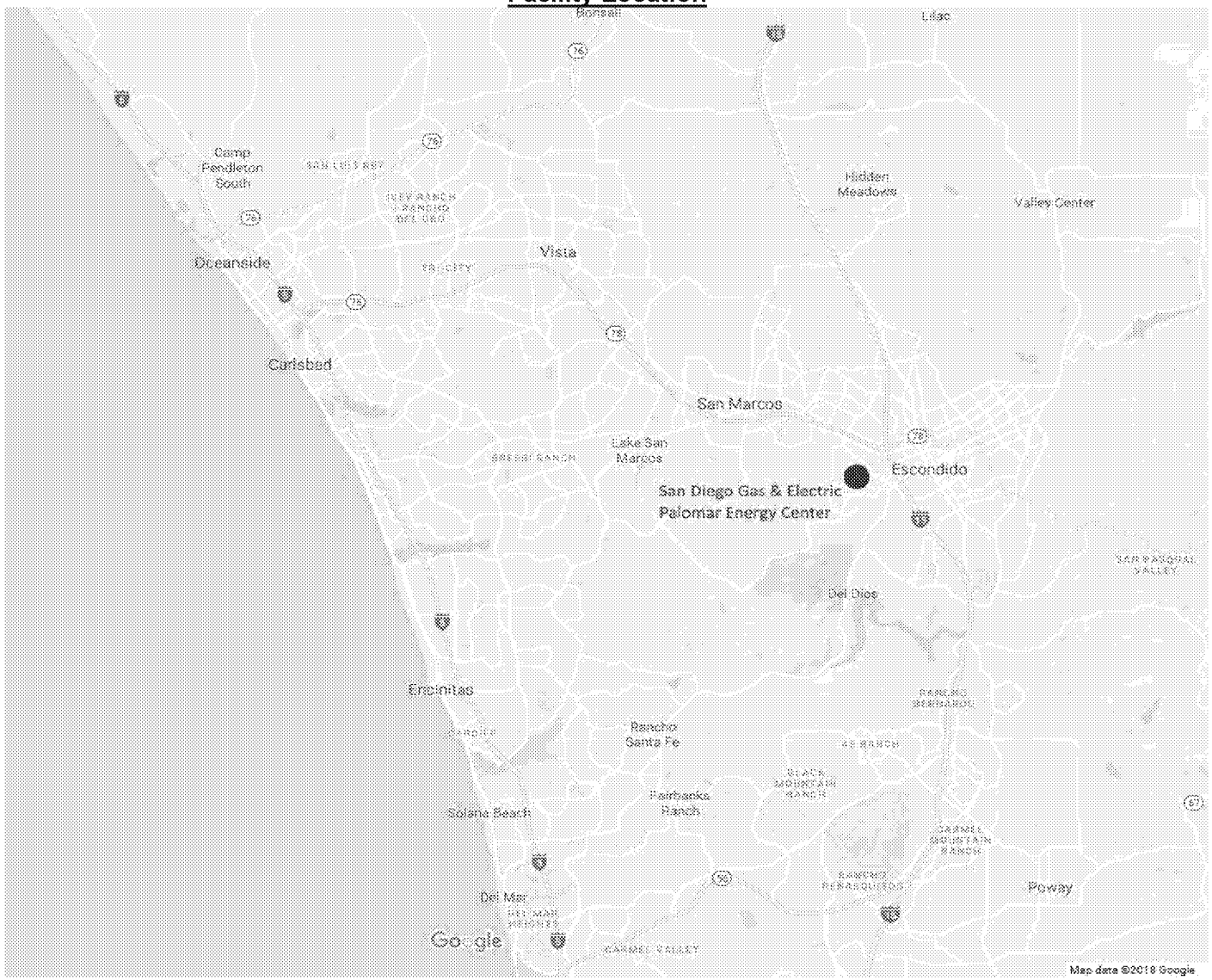
Water Quality Control Plans
There are two types of water quality control plans - Basin Plans and Statewide Plans. Regional Boards adopt Basin Plans for each region based upon surface water hydrologic basin boundaries. The Regional Basin Plans designates or describes (1) existing and potential beneficial uses of ground and surface water; (2) water quality objectives to protect the beneficial uses; (3) implementation programs to achieve these objectives; and (4) surveillance and monitoring activities to evaluate the effectiveness of the water quality control plan. The Statewide Plans address water quality concerns for surface waters that overlap Regional Board boundaries, are statewide in scope, or are otherwise considered significant and contain the same four elements. Statewide Water Quality Control Plans include the Ocean Plan, the Enclosed Bays and Estuaries Plan, the Inland Surface Waters Plan, and the Thermal Plan. A water quality control plan consists of a designation or establishment for the waters within a specified area of (1) beneficial uses to be protected, (2) water quality objectives, and (3) a program of implementation needed for achieving water quality objectives [California Water Code section 13050(j)].

Water Quality Objectives
Numerical or narrative limits on constituents or characteristics of water designed to protect designated beneficial uses of the water. [California Water Code section 13050(h)]. California's water quality objectives are established by the State and Regional Water Boards in the Water Quality Control Plans.

Water Quality Standards
Provisions of State or federal law which consist of a designated use or uses for waters of the United States and water quality criteria for such waters based upon such uses. Water quality standards are to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act [40 CFR section 131.3(i)]. Under State law, the Water Boards establish beneficial uses and water quality objectives in their water quality control plans or basin plans. Together with an antidegradation policy, these beneficial uses and water quality objectives serve as water quality standards under the Clean Water Act. In Clean Water Act parlance, state beneficial uses are called "designated uses" and state water quality objectives are called "criteria." Throughout this Order, the relevant term is used depending on the statutory scheme.

ATTACHMENT B – MAP

Facility Location



Monitoring Locations at Facility